UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
PHUNG, LUAT

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

Office Action Summary	Application No. 10/571,290	Applicant(s) VILLEFRANCE, RASMUS
	Examiner LUAT PHUNG	Art Unit 2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2006*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-27* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *09 March 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
        1.☒ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees.   A nonstatutory
obviousness-type double patenting rejection is appropriate where the conflicting claims
are not identical, but at least one examined application claim is not patentably distinct
from the reference claim(s) because the examined application claim is either anticipated
by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140
F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29
USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.
1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422
F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163
USPQ 644 (CCPA 1969).
       A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d)
may be used to overcome an actual or provisional rejection based on a nonstatutory
double patenting ground provided the conflicting application or patent either is shown to
be commonly owned with this application, or claims an invention made as a result of
activities undertaken within the scope of a joint research agreement.
       Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

2.   Claims 1-8, 18, and 24-27 are rejected on the ground of nonstatutory double

patenting over claims 1, 2, 4-9, 19 and 20 of U. S. Patent No. 7,313,136 since the

claims, if allowed, would improperly extend the "right to exclude" already granted in the

patent.

       The subject matter claimed in the instant application is fully disclosed in the

patent and is covered by the patent since the patent and the application are claiming

common subject matter, as follows:

       Furthermore, there is no apparent reason why applicant was prevented from

presenting claims corresponding to those of the instant application during prosecution of

the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158

USPQ 210 (CCPA 1968). See also MPEP § 804.

Regarding **claim 1**, although the conflicting claims are not identical, they are not

patentably distinct from each other because claim 1 of the instant application merely

broadens the scope of claim 1 of the Villefrance Patent by eliminating the elements and

their functions as set forth below.

Claim 1 of Instant Application	Claim 1 of Villefrance Patent
Limitation 1. A system for providing data communication between modules connected *through a port connector*, wherein said modules are adapted to communicate a data package comprising	Limitation 1. A system for providing data communication between **a plurality of electronic** modules connected *to an I2C-bus*, **wherein the system comprises said plurality of electronic modules and said I2C-bus; and** wherein **each of** said **plurality of electronic** modules communicates, **via said I2C-bus**, a data package comprising
Limitation 2. in a layered structure a physical layer *comprising a first and a second segment for encapsulating other layers in said data package*,	Limitation 2. a layered structure having a physical layer *complying with I2C specifications*,
Limitation 3. a data link layer comprising a first header field for data payload type and a second header field for a data link layer version, and	Limitation 3. a data link layer comprising first header field for data payload type and a second header field for a data link layer version, and
Limitation 4. a network/transport layer comprising a third header field for a transmitting module's address, a fourth header field for a length of said data package, and comprising data payload	Limitation 4. a network/transport layer comprising a third header field for transmitting **an electronic** module's address, a fourth header field for a length of said data package, and comprising a data payload
Limitation 5. NONE	Limitation 5. **and wherein information**

	contained within said header fields provides compatibility among individual ones of said electronic modules operating under differing rules of data exchange.

In view of the above, it is clear that the conflicting claims are not patentably distinct from each other because claim 1 of the instant application merely broadens the scope of claim 6 of the Villefrance Patent by eliminating the bold text or replacing the equivalent bold, italic text in the Villefrance Patent.

Regarding **claims 2-8**, although the conflicting claims are not identical, they are not patentably distinct from each other because claims 2-8 of the instant application merely broadens the scope of claims 2 and 4-9, respectively, of the Villefrance Patent by eliminating the elements and their functions as set forth below.

Instant Application	Villefrance Patent
Claim 2. A system according to claim 1, wherein said modules comprise a mobile communication device *such as* a cell, mobile or satellite telephone, a personal digital assistant, or a peripheral thereto.	Claim 2. A system according to claim 1, wherein said **electronic** modules comprise a mobile communication device *consisting of* a cell, mobile or satellite telephone, a personal digital assistant, or peripherals thereto.
3. A system according to claim 1, wherein said data link layer version comprises a major version, which is binary incompatible, and a minor version, which is binary compatible.	4. A system according to claim 1, wherein said data link layer version comprises a major version, which is binary incompatible, and a minor version, which is binary compatible.
4. A system according to claim 1,	5. A system according to claim 1,

wherein said data package further comprises in said network/transport layer a fifth header field for an offset value for determination of data payload start in said data package.	wherein said data package further comprises in said network/transport layer a fifth header field for an offset value for determination of data payload start in said data package.
5. A system according to claim 1, wherein said data package further comprises in said network/transport layer a sixth header field prior to said data payload start in said data package for buffering.	6. A system according to claim 1, wherein said data package further comprises in said network/transport layer a sixth header field, **located** prior to said data payload start in said data package, for buffering **the data payload from other ones of the header fields.**
6. A system according to claim 1, wherein said data package further comprises a checksum field following the data payload.	7. A system according to claim 1, wherein said data package further comprises a checksum field following the data payload.
7. A system according to claim 1, wherein said data package further comprises in said network/transport layer a seventh header field for a data package number.	8. A system according to claim 1, wherein said data package further comprises in said network/transport layer a seventh header field for a data package number.
8. A system according to claim 1, wherein said data package further comprises in said network/transport layer an eighth header field for a data package fragment sequence number.	9. A system according to claim 1, wherein said data package further comprises in said network/transport layer an eighth header field for a data package fragment sequence number.

In view of the above, it is clear that the conflicting claims are not patentably distinct from each other because claims 5 of the instant application merely broadens the scope of claim 6 of the Villefrance Patent by eliminating the bold text in the Villefrance Patent, and the remaining claims are substantially identical.

Claims 18, 24 and 25 recites a data structure, a receiver and a transmitter corresponding to claim 1 which recites a system that is not patentably distinct from the

system in claim 1 of the Villefrance Patent, as recited in the obviousness-type double

patenting rejection of claim 1 above.

Regarding **claims 26 and 27**, although the conflicting claims are not identical,

they are not patentably distinct from each other because claims 26 and 27 of the instant

application merely broadens the scope of claims 19 and 20, respectively, of the

Villefrance Patent by eliminating the elements and their functions in a similar manner as

shown above in claim 1 of the instant application.

Specification

3.   Applicant is reminded of the proper language and format for an abstract of the

disclosure.

The abstract should be in narrative form and generally limited to a single
paragraph on a separate sheet within the range of 50 to 150 words. It is important that
the abstract not exceed 150 words in length since the space provided for the abstract
on the computer tape used by the printer is limited. The form and legal phraseology
often used in patent claims, such as "means" and "said," should be avoided. The
abstract should describe the disclosure sufficiently to assist readers in deciding whether
there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information
given in the title. It should avoid using phrases which can be implied, such as, "The
disclosure concerns," "The disclosure defined by this invention," "The disclosure
describes," etc.

4.   The abstract of the disclosure is objected to because it is not on a separate

sheet. See MPEP § 608.01(b).

Claim Objections

5.   Claims 1-17, 24, 25 and 27 are objected to because of the following informalities:

Regarding **claim 1**, an objection is made to the use of the word "adapted (to)" on

line 2. This word constitutes optional language that does not further limit this claim.

Specifically, it is not known whether the limitations following this word are necessary or

optional. The same objection applies to **claims 13-15, 24, 25 and 27**.

Regarding **claim 13**, the limitation "said second segment further comprises a

sequence and acknowledge field is adapted to inform..." is unclear; which entity is to

inform?

Claim 14 recites "<u>further</u> adapted to inform"; should this claim be depending on

claim 13, which recites "adapted to inform", instead of claim 12?

Claims 2-12 and 16-17 are objected to as being dependent on an objected base

claim, namely claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7.   Claims 2, 5 and 20 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Regarding **claim 2**, the phrase "such as" renders the claim indefinite because it

is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

Claim 5 recites the limitation "said data payload start" in line 3. There is

insufficient antecedent basis for this limitation in the claim. It appears to refer to "data

payload start" in claim 4. The same rejection applies to **claim 20**.

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.   Claims 18-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding **claims 18-23**, applicant is claiming "data package", which is data structure per se.

Claims 24 and 25 are rejected as being dependent on a rejected base claim, namely claim 18.

Claim 26 recites the step of *providing in said data package in a data link layer a first header field for data payload type and a second header field for a data link layer version, providing in said data package in a network/transport layer a third header field for a transmitting module's address and a fourth header field for a length of said data package, and providing in said data package a data payload.*

Claim 26 fails to cite any structural tie to any class of invention and therefore does not satisfy the threshold tie to be eligible for patent protection under 35 U.S.C. 101. While the claim recites a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claim neither transforms underlying subject matter nor positively ties to another statutory category that accomplishes the

claimed method steps, and therefore does not qualify as a statutory process. In

particular, the method includes the step(s) of providing that appears purely directed to

mental steps or mathematical manipulations of functions that fail to positively recite the

other statutory class (machine or apparatus) to which it is tied by identifying the

machine/apparatus that accomplishes the method steps. The steps might imply that a

machine/apparatus is being used, but the steps do not inherently require the

machine/apparatus. Therefore, the method is not a patent eligible process under 35

U.S.C. 101 because it is being directed to non-statutory subject matter. See *Federal

Circuit Court Decision, In re Bilski*, Appeal No. 2007-1130.

Regarding **claim 27**, the limitation "computer program" recited in line 1 is not a

process, machine, manufacturer, or composition of matter, or any new and useful

improvement thereof because there is no physical structure/connection of computer

software recited in the claim.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious
> at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

11.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

      1.   Determining the scope and contents of the prior art.

      2.   Ascertaining the differences between the prior art and the claims at issue.

      3.   Resolving the level of ordinary skill in the pertinent art.

      4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

12.   Claims 1, 2, 4-6, 18-21 and 24-27 are rejected under U.S.C. 103(a) as being unpatentable over Lawande et al (US 6,219,697).

Regarding **claims 1, 18 and 24-27**, Lawande discloses a system, a receiver, a transmitter, a method and a computer program for providing data communication between modules connected through a port connector (col. 1, lines 21-25; network connecting different modules), wherein said modules are adapted to communicate a data package (Fig. 7C; col. 17; routing of packet) comprising in a layered structure (col. 1, lines 28-45; layering) a data link layer comprising a first header field for data payload type and a second header field for a data link layer version (Fig. 7C, protocol_type, pn_version; col. 1, lines 46+), and a network/transport layer comprising a third header field for a transmitting module's address, a fourth header field for a length of said data package (Fig. 7C, source_ID, ip_total_length; Fig. 7D, source_ID, total_length; col. 1, lines 46+), and comprising data payload. (Fig. 7C, ip_data).

Lawande discloses all of the subject matter except a physical layer comprising a first and a second segment for encapsulating other layers in said data package. However Lawande discloses the physical layer such as IEEE 1394 high speed serial bus as part of the layering framework following the OSI model (col. 1, line 47 to col. 2, line 19). It is well known to one of ordinary skill in the art at the time of the invention that in the OSI model the lower layer, e.g., the physical layer, encapsulates the data of the

upper layers, and that IEEE 1394 physical includes first and second segments for such

an encapsulation. Thus it would have been obvious to one of ordinary skill in the art at

the time of the invention to include in a data package the fields of the IEEE 1394

physical layer in order to encapsulate and transport data of the upper layers.

Regarding **claim 2**, Lawande further discloses wherein said modules comprise a

mobile communication device such as a cell, mobile or satellite telephone, a personal

digital assistant, or a peripheral thereto. (Fig. 1; col. 5, line 54 to col. 6, line 9)

Regarding **claims 4 and 19**, Lawande further discloses wherein said data

package further comprises in said network/transport layer a fifth header field for an

offset value for determination of data payload start in said data package. (col. 17, lines

5-13)

Regarding **claims 5 and 20**, Lawande further discloses wherein said data

package further comprises in said network/transport layer a sixth header field prior to

said data payload start in said data package for buffering. (Fig. 7C, ip_fragment_offset)

Regarding **claims 6 and 21**, Lawande further discloses wherein said data

package further comprises a checksum field following the data payload. (Fig. 7C,

data_CRC, ip_data)

13.   Claim 3 is rejected under U.S.C. 103(a) as being unpatentable over Lawande et

al (US 6,219,697), in view of Shuen (US 5,572,528).

Regarding **claim 3**, Lawande discloses all of the subject matter as recited

previously in this office action except wherein the data link layer version comprises a

major version, which is binary incompatible, and a minor version, which is binary

compatible. Shuen from the same or similar fields of endeavor discloses wherein the

data link layer version comprises a major version, which is binary incompatible, and a

minor version, which is binary compatible (col. 31, lines 1-24). Thus it would have been

obvious to the person of ordinary skill in the art at the time of the invention to implement

the header containing the major and minor version numbers of Shuen in the message of

Lawande in order to identify compatibility of services.

14.   Claims 7-17 are rejected under U.S.C. 103(a) as being unpatentable over

Lawande et al (US 6,219,697), in view of Chuah (US Pub. 2003/0214928).

        Regarding **claims 7, 8 and 10-15**, Lawande discloses all of the subject matter

except:

        wherein said data package further comprises in said network/transport layer a

seventh header field for a data package number, as recited in claim 7;

        wherein said data package further comprises in said network/transport layer an

eighth header field for a data package fragment sequence number, as recited in claim 8;

        wherein said first segment further comprises a synchronization field for

synchronizing the receiving module with the transmitting module, as recited in claim 10;

        wherein said second segment of the physical layer comprises an index byte for

providing the receiving module with information regarding segmentation or partitioning

of data contained in a message, as recited in claim 11;

wherein said second segment further comprises a sequence and acknowledge field for providing a receiving module with information whether said data package is an acknowledgement message or an ordinary message, as recited in claim 12;

wherein said second segment further comprises a sequence and acknowledge field is adapted to inform whether an error was identified in the received data package, when said data package is an acknowledgement message, as recited in claim 13;

wherein said sequence and acknowledgement field is further adapted to inform a receiving module that a sequence number in said receiving module should be reset, as recited in claim 14; and

wherein said sequence and acknowledgement field is adapted to recognise acknowledgement messages and detect missing data packages, as recited in claim 15.

However Lawande discloses the use of protocols such as TCP, UDP over the IP, link and physical layers (Fig. 5). It is well known to one of ordinary skill in the art at the time of the invention that these layers of the protocol stack comprise the sequence number, i.e., data package number of claim 7, fragment number, i.e., fragment sequence number of claim 8, and hand-shake protocol including acknowledgement or other message of claim 12 and information about segmentation, synchronization and error detection and correction of claims 11 and 13-15. Specifically Chuah from the same or similar field of endeavor discloses a MAC header containing fields such as sequence control comprising sequence number and fragment number, frame control, reservation acks, acks for data, etc. (Fig. 6, 7 and 8; para. 97-117). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to construct a

message of Lawande to include these additional fields of Chuah in headers of data packets to ensure full and accurate transmission in the ubiquitous IP network.

Regarding **claim 9**, Lawande discloses all of the subject matter except wherein said first segment of said physical layer comprises a media field for defining media across which the data package is transferred. Chuah from the same or similar field of endeavor discloses a header containing type and subtype fields describing the type of control and payload data. (Fig. 6F; para. 103). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to construct a message of Lawande to include the payload type field of Chuah to optimize routing of data packets.

Regarding **claim 16**, Lawande further discloses wherein said second segment further comprises a fill field for ensuring that all data packages sent over said port connector contain an even amount of bytes. (Fig. 7C, padding; col. 18, lines 3-7)

Regarding **claim 17**, Lawande discloses all of the subject matter except wherein said second segment further comprises a parity field for storing parity calculated on the basis of the data package excluding the parity field. Chuah from the same or similar field of endeavor discloses wherein said second segment further comprises a parity field for storing parity calculated on the basis of the data package excluding the parity field. (Fig. 6A, FCS; para. 97). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to construct a message of Lawande to include the FCS field of Chuah to optimize routing of data packets.

Conclusion

15.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure (see form 892).

16.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LUAT PHUNG whose telephone number is (571) 270-

3126. The examiner can normally be reached on M-Th 7:30 AM - 5:00 PM, F 7:30 AM -

4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. P./

Examiner, Art Unit 2416

/Ricky Ngo/

Supervisory Patent Examiner, Art Unit 2416